INDEX OF AUTHORS.

ALMOUR, RALPH, 112, 802.

BABBITT, JAMES A., 47, 789.
Ballenger, Howard C., 899.
Barnes, Lancelot, 909.
Beck, August L., 741.
Beck, Joseph C., 286, 607, 1227.
Boemer, L. C., 866.
Brandon, William R., 878.
Buhrmester, Catherine C., 1041.
Butler, Ethan F., 927.

CAMPBELL, EDWARD H., 51.
Canfield, Norton, 903.
Carmack, John W., 364.
Chamberlin, William B., 915.
Clerf, Louis H., 1, 920, 1058.
Coates, George M., 400.
Cochran, A. H., Jr., 498.
Costen, James B., 372.

DEAN, L. WALLACE, JR., 484.
Delavan, D. Bryson, 321.
Dickson, J. Chas., 1240.

EMERSON, FRANCIS P., 192.

FAIER, SAMUEL Z., 408.
Fenton, Ralph A., 911.
Fetissof, Alexander G., 533.
Foster, John H., 548.
Foster, M. E., 588.
Fowler, Edmund Prince, 714.
Frank, Ira, 641.

GETTY, RUTH E., 576.
Gill, E. G., 1235.
Gittin, T. R., 463.
Glick, H. N., 175.
Golden, Lewis A., 1122.
Gottlieb, Mark J., 835.
Guggenheim, Louis K., 251, 596, 690, 1171.
Guttman, M. Reese, 286, 607.

HALSTED, T. H., 1229.
Hurd, Lee M., 39.

IGLAUER, SAMUEL, 930, 932.
Imperatori, Charles J., 799, 923, 1231.
Israel, Sidney, 157.

JANSE, H. M., 1110.
Jenkins, John L., 539.
Johnson, M. C., 588.

KEITH, NORMAN M., 95.
King, Edward, 126.
Kistner, Frank B., 583.
Kopetzky, Samuel J., 802.

LACY, N. EUGENE, 526.
Laszlo, Alexander F., 892.
LeMée, J. M., 712.
Lewis, Eugene R., 135.
Linton, C. S., 64.
Loré, John M., 1205.
Looper, Edward A., 1104.
Lurie, M. H., 1069.
Lyons, Horace R., 592.

MACFARLAN, DOUGLAS, 680.
Maclay, Otis H., 567.
Manges, Willis F., 1058.
McKinney, Richmond, 1237.
McMahon, Bernard J., 660.
McNally, W. J., 82.
Murphy, Albert B., 166.
Myerson, M. C., 829, 1224.

PEPPER, O. H. PERRY, 87.
Pfingsten, Marian G., 484.
Pohlman, A. G., 352.
Potts, John B., 1002.
Proetz, Arthur W., 778.

RICHARDS, LYMAN, 692, 1014.
Roberts, Sam. E., 385.
Roy, Dunbar, 1117.
Ruskin, Simon L., 961.

SALINGER, SAMUEL, 850.
Schall, LeRoy A., 15.
Schenck, C. P., 1128.
Sewall, Edward C., 391.
Seydell, Ernest M., 455, 1081.
Shapiro, S. L., 504.
Sharp, J. Clarence, 498.
Simon, Emanuel, 198.
Stitt, H. L., 887.
Strauss, Abraham, 230.

TREMBLE, G. EDWARD, 560.

VAIL, HARRIS H., 476.

WEBER, MORITZ H., 438.
Weidlein, Ivan F., 915.
Wolff, Dorothy, 1136.
Wolfson, Louis E., 1122.
Wood, V. V., 240.

INDEX OF AUTHORS.

ALMOUR, RALPH, 112, 802.

BABBITT, JAMES A., 47, 789.
Ballenger, Howard C., 899.
Barnes, Lancelot, 909.
Beck, August L., 741.
Beck, Joseph C., 286, 607, 1227.
Boemer, L. C., 866.
Brandon, William R., 878.
Buhrmester, Catherine C., 1041.
Butler, Ethan F., 927.

CAMPBELL, EDWARD H., 51.
Canfield, Norton, 903.
Carmack, John W., 364.
Chamberlin, William B., 915.
Clerf, Louis H., 1, 920, 1058.
Coates, George M., 400.
Cochran, A. H., Jr., 498.
Costen, James B., 372.

DEAN, L. WALLACE, JR., 484.
Delavan, D. Bryson, 321.
Dickson, J. Chas., 1240.

EMERSON, FRANCIS P., 192.

FAIER, SAMUEL Z., 408.
Fenton, Ralph A., 911.
Fetissof, Alexander G., 533.
Foster, John H., 548.
Foster, M. E., 588.
Fowler, Edmund Prince, 714.
Frank, Ira, 641.

GETTY, RUTH E., 576.
Gill, E. G., 1235.
Gittin, T. R., 463.
Glick, H. N., 175.
Golden, Lewis A., 1122.
Gottlieb, Mark J., 835.
Guggenheim, Louis K., 251, 596, 690, 1171.
Guttman, M. Reese, 286, 607.

HALSTED, T. H., 1229.
Hurd, Lee M., 39.

IGLAUER, SAMUEL, 930, 932.
Imperatori, Charles J., 799, 923, 1231.
Israel, Sidney, 157.

JANSE, H. M., 1110.
Jenkins, John L., 539.
Johnson, M. C., 588.

KEITH, NORMAN M., 95.
King, Edward, 126.
Kistner, Frank B., 583.
Kopetzky, Samuel J., 802.

LACY, N. EUGENE, 526.
Laszlo, Alexander F., 892.
LeMée, J. M., 712.
Lewis, Eugene R., 135.
Linton, C. S., 64.
Loré, John M., 1205.
Looper, Edward A., 1104.
Lurie, M. H., 1069.
Lyons, Horace R., 592.

MACFARLAN, DOUGLAS, 680.
Maclay, Otis H., 567.
Manges, Willis F., 1058.
McKinney, Richmond, 1237.
McMahon, Bernard J., 660.
McNally, W. J., 82.
Murphy, Albert B., 166.
Myerson, M. C., 829, 1224.

PEPPER, O. H. PERRY, 87.
Pfingsten, Marian G., 484.
Pohlman, A. G., 352.
Potts, John B., 1002.
Proetz, Arthur W., 778.

RICHARDS, LYMAN, 692, 1014.
Roberts, Sam. E., 385.
Roy, Dunbar, 1117.
Ruskin, Simon L., 961.

SALINGER, SAMUEL, 850.
Schall, LeRoy A., 15.
Schenck, C. P., 1128.
Sewall, Edward C., 391.
Seydell, Ernest M., 455, 1081.
Shapiro, S. L., 504.
Sharp, J. Clarence, 498.
Simon, Emanuel, 198.
Stitt, H. L., 887.
Strauss, Abraham, 230.

TREMBLE, G. EDWARD, 560.

VAIL, HARRIS H., 476.

WEBER, MORITZ H., 438.
Weidlein, Ivan F., 915.
Wolff, Dorothy, 1136.
Wolfson, Louis E., 1122.
Wood, V. V., 240.

INDEX OF TITLES.

ABSCESS of the Brain: A Bacterial Study. Horace R. Lyons, 592.

Agranulocytosis: Appearance of the Early Pharyngeal Lesion: Three Cases. One Apparent Recovery. James B. Costen, 372.

Agranulocytosis with Mastoiditis: Report of a Case. J. C. Sharp and A. H. Cochran, Jr., 498.

Anatomical and Clinical Considerations of the Cavernous Sinus. E. H. Campbell, 51.

Anesthetic, Local: The Use of Diothane for the Nose and Throat. H. L. Stitt, 887.

Anesthetic, Local; The Use of Pantocain as a Substitute for Cocain. A. F. Laszlo, 892.

Antroscopy and Its Relation to the Anatomy of the Maxillary Sinus. Emanuel Simon, 198.

Arthritis, Chronic, The Nasal Accessory Sinuses as Foci of Infection. L. M. Hurd, 39.

Atresia, Congenital, of the External Auditory Meatus. Lyman Richards, 692.

Auditory Mechanism: Significant Anatomic Features with Special Reference to the Late Fetus. Dorothy Wolff, 1136.

Audition, Unreal Phenomena and Their Relation to Test Methods. A. G. Pohlman, 352.

BACTERIOLOGY of the Maxillary Sinuses: Clinical Aspect. O. H. Maclay, 567.

Bacteriology of the Maxillary Sinuses; Laboratory Aspect. R. E. Getty, 576.

Blood Dyscrasias and Hematology in Relation to Diseases of the Eye, Ear, Nose and Throat. O. H. Perry Pepper, 87.

Blue Mantles in Otosclerosis: A Contribution to the Pathology of the Labyrinthine Capsule. Moritz H. Weber, 438.

Brain Abscess: A Bacterial Study. Horace R. Lyons, 592.

Broncho-Esophageal Fistula: Report of Case. Louis H. Clerf, 920.

Bronchoscope and Esophagoscope, The Use of the Author's Improved Instruments in Diagnosis and in the Removal of Foreign Bodies. Sidney Israel, 157.

Bronchoscope: A Study of Chronic Unexplained Cough with its Aid. L. E. Wolfson and L. A. Golden, 1122.

Bronchoscopic, Four Unusual Cases. E. G. Gill, 1235.

Bronchoscopist's Spectacles, A Protecting Lens. Samuel Iglauer, 930.

CANCER, Intrinsic; Advantages of One-Stage Laryngectomy Through a Straight Midline Incision. W. R. Brandon, 878.

Carcinoma of the Esophagus Engrafted Upon a Lye Stricture of Twenty-six Years' Duration. M. C. Myerson, 1224.

Carcinoma of the Hypopharynx. Joseph C. Beck and M. Reese Guttman, 286.

Carcinoma of the Larynx, Some Practical Observations. J. C. Beck and M. R. Guttman, 607.

Carcinoma of Nasopharynx with Destruction of the Cranial Nerves, Including the Second and Eighth Nerves. H. C. Ballenger, 899.

Carcinoma, Primary, of the Lung: Bronchoscopic Observations. E. A. Looper, 1104.

Cardiovascular Diseases in Relation to the Retina. Norman M. Keith, 95.

Carotid Artery, External, Ligation for Traumatic Nasal Hemorrhage. M. C. Johnson and M. E. Foster, 588.

Catheter, Eustachian: A Short Historical Outline. G. E. Tremble, 560.

Cavernous Sinus: Anatomical and Clinical Considerations. E. H. Campbell, 51.

Cholesteatoma, A Chemical and Cytologic Study of Aural and Nasal Exudates as Regards Chemical Diagnosis. L. W. Dean, Jr., and M. G. Pfingsten, 484.

Cicatricial Stenosis of the Larynx. L. H. Clerf, 1.

Cilia, Nasal. Studies in the Living Mammal. A. W. Proetz, 778.

Circulation, Venous, of the Petrous Bone and Its Clinical Significance. S. L. Ruskin, 961.

Cochlea, Its Phylogenic Development. M. H. Lurie, 1069.

Cochlea Sequestration: Report of Two Cases. I. F. Weidlein and W. B. Chamberlin, 915.

Cough, Chronic Unexplained. A Study With the Aid of the Bronchoscope. L. E. Wolfson and L. A. Golden, 1122.

Cytologic and Chemical Study of Aural and Nasal Exudates as Regards the Chemical Diagnosis of Cholesteatoma. L. W. Dean, Jr., and M. G. Pfingsten, 484.

Cytological Study of the Sphenoid Sinus. Edw. C. Sewall, 391.

DIAGNOSIS, Differential, in Headache of Periodic Type. T. R. Gittins, 463.

Diothane as a Local Anesthetic for the Nose and Throat. H. L. Stitt, 887.

Diphtheria, Tracheobronchial: Tracheotomy; Repeated Bronchoscopic Removal of Membranes; Recovery. E. F. Butler, 927.

EAR, Internal; The Influence of the Sympathetic Nervous System. Albert B. Murphy, 166.

Emphysema, Subcutaneous Following Tonsillectomy. J. C. Dickson, 1240.

Epistaxis in Pregnancy Requiring Ligation of the External Carotid: Review and Case Report. Abraham Strauss, 230.

Esophageal Diverticulum, Presentation of a Case. J. C. Beck, 1227.

Esophagoscope and Bronchoscope; the Use of the Author's Improved Intruments in Diagnosis and in the Removal of Foreign Bodies. Sidney Israel, 157.

Esophagus, Accidental Perforation: Gastrostomy: Recovery. Charles J. Imperatori, 799.

Esophagus, Carcinoma Engrafted Upon a Lye Stricture of Twenty-six Years' Duration. M. C. Myerson, 1224.

Esophagus, Congenital Anomalies; With Special Reference to the Congenitally Short Esophagus With a Portion of the Stomach Above the Diaphragm. L. H. Clerf and W. F. Manges, 1058.

Esophagus, Congenital Malformation; Report of a Case. C. J. Imperatori, 1231.

Esophagus, Tuberculosis of, with Report of a Case Following Lye Ingestion. M. C. Myerson, 829.

Ethmoid Labyrinth, Technical Procedure of the Operation on Osteomas. Alexander G. Fetissof, 533.

Eustachian Catheter: A Short Historical Outline. G. E. Tremble, 560.

FISTULA, Broncho-Esophageal: Report of Case. Louis H. Clerf, 920.

Fistula, Tracheo-Esophageal, Probably Congenital in a Woman 58 Years of Age. Richmond McKinney, 1237.

Fixation Deafness with Improved Hearing: Case Reports. Eugene R. Lewis, 135.

Foreign Bodies, Nonopaque, in the Food and Air Passages. C. P. Schenck, 1128.

HEADACHE, Differential Diagnosis in Those of Periodic Type. T. R. Gittins, 463.

Hearing, Improved, With Fixation Deafness. E. R. Lewis, 135.

Hearing, Physiology—Aural Acuity—Bone Conduction; A Critical Review. M. J. Gottlieb, 835.

Hearing Testing and Hearing Impressions Through Nerves Other Than the Eighth as Related to Tactile Sensation. Douglas Macfarlan, 680.

Hemorrhage, Nasal. Some Clinical Observations. Dunbar Roy, 1117.

Hemorrhage, Nasal; Trauma Necessitating Ligation of the External Carotid Artery. M. C. Johnson and M. E. Foster, 588.

Hematology and the Blood Dyscrasias in Relation to Diseases of the Eye, Ear, Nose and Throat. O. H. Perry Pepper, 87.

Histology and Chronic Inflammation of the Nasal Mucous Membrane. L. A. Schall, 15.

Hypopharynx, Carcinoma of, Joseph C. Beck and M. Reese Guttman, 286.

INFECTION of the Neck; A Study of Twenty-four Cases. August L. Beck, 741.

Increased Intracranial Pressure and Its Relation to Disease in the Pneumatic Spaces. John W. Carmack, 364.

LARYNGECTOMY, Advantages of One-Stage Operation Through a Straight Midline Incision in Cases of Intrinsic Cancer. W. R. Brandon, 878.

Laryngis Papillomatosis. John H. Foster, 548.

Laryngofissure Operation, Suggested Modifications. John M. Loré, 1205.

Laryngo-Tracheo-Bronchitis, Fulminating. Lyman Richards, 1014.

Larynx, Cicatricial Stenosis of. L. H. Clerf, 1.

Larynx, Foreign Body Embedded. T. H. Halsted, 1229.

Larynx, Perforation of by a Metallic Foreign Body Removed by Laryngofissure. Samuel Iglauer, 932.

Larynx, Schwannoma of. Harris H. Vail, 476.

Larynx, Some Practical Observations upon Carcinoma. Joseph C. Beck and M. Reese Guttman, 607.

Lichen Planus of the Oral Cavity without Cutaneous Manifestations. Sam E. Roberts, 385.

Lipiodol Elimination from the Nasal Sinuses. J. M. LeMée, 712.

Lymphatic Cells in Disease of the Upper Respiratory Tract. John L. Jenkins, 539.

MALIGNANCIES of Upper Air Passages: A Statistical Review. Samuel Salinger, 850.

Mastoiditis, Acute: Early Operation or Delayed. V. V. Wood, 240.

Mastoiditis with Agranulocytosis: Report of a Case. J. C. Sharp and A. H. Cochran, Jr., 498.

Mastoiditis, Recurring. N. Eugene Lacy, 526.

Maxillary Sinus. Antroscopy and the Relation to Its Anatomy. Emanuel Simon, 198.

Mediastinitis with Pericarditis as a Terminal Lesion: Report of a Case Following the Inhalation of a Foreign Body in the Bronchus and Accompanied by Spontaneous Emphysema. C. J. Imperatori, 923.

Meningitis, Otitic, and Temporal Bone Sections; Some Observations. L. C. Boemer, 866.

Microscopic Observations of the Petrous Apex. H. N. Glick, 175.

Mucosa, Upper Respiratory, and Its Resistance to Infection. C. S. Linton, 64.

Mucous Membrane, Nasal, of the Rabbit. The Spread and Phagocytosis of Particulate Matter. J. B. McMahon, 660.

Mucus, Nasal. A Study of Hydrogen-ion Concentration, Nitrogen Content and Viscosity. C. C. Buhrmester, 1041.

NASAL Accessory Sinuses as Foci of Infection in Chronic Arthritis. L. M. Hurd, 39.

Nasal Mucous Membrane, Histology and Chronic Inflammation of. L. A. Schall, 15.

Nasopharynx, Carcinoma with Destruction of the Cranial Nerves, Including the Second and Eighth Nerves. H. C. Ballenger, 899.

Neuralgia, Nasociliary, Caused by Osteoma. R. A. Fenton, 911.

Neuro-otologic Cases. S. L. Shapiro, 504.

ONTOGENESIS of the Aural Capsule. Louis K. Guggenheim, 596, 1171.

Osteoma as the Cause of Nasociliary Neuralgia. R. A. Fenton, 911.

Osteomas of the Ethmoid Labyrinth, The Technical Procedure of the Operation. Alexander G. Fetissof, 533.

Otosclerosis. Louis K. Guggenheim, 251, 596, 1171.

Otosclerosis Complicated by Other Lesions: A Study of Roentgenograms, Audiograms, Laboratory and Clinical Findings. E. P. Fowler, 714.

Otosclerosis, The Blue Mantles in: A Contribution to the Pathology of the Labyrinthine Capsule. Moritz H. Weber, 438.

Otosclerosis in a Seven Months Fetus. Louis K. Guggenheim, 690.

Otitic Origin of Retropharyngeal Abscess; Anatomy and Pathogenesis with Report of Cases. Samuel Z. Faier, 408.

Otitis Media, Chronic Suppurative; Associated with a Case of Parageusia. Lancelot Barnes, 909.

PANTOCAIN as a Substitute for Cocain: Preliminary Report. A. F. Laszlo, 892.

Papillomata of the Nose and Their Relationship to Carcinoma. E. M. Seydell, 1081.

Papillomatosis Laryngis. John H. Foster, 548.

Parageusia, A Case Associated with Chronic Suppurative Otitis Media. Lancelot Barnes, 909.

Parathyroid Insufficiency: Report of Some Respiratory Cases. Frank B. Kistner, 583.

Pericarditis as a Terminal Lesion in Mediastinitis: Report of a Case Following the Inhalation of a Foreign Body in the Bronchus and Accompanied by Spontaneous Emphysema. C. J. Imperatori, 923.

Personal Recollections of a Great Laryngologist: Sir Morell Mackenzie. D. Bryson Delavan, 321.

Petrosal Pyramid, Surgical Treatment in Cases of Suppuration. Ernest M. Seydell, 455.

Petrous Apex, Empyema: Further Observations and Case Reports. S. J. Kopetzky and Ralph Almour, 802.

Petrous Apex, Microscopic Observations. H. N. Glick, 175.

Petrous Bone: The Venous Circulation and Its Clinical Significance. S. L. Ruskin, 961.

Phagocytosis and Spread of Particulate Matter in Nasal Mucous Membrane of the Rabbit. B. J. McMahon, 660.

Phylogenesis of the Ear. Louis K. Guggenheim, 251.

Physiology of Hearing—Aural Acuity—Bone Conduction: A Critical Review. M. J. Gottlieb, 835.

Practical Application of Wittmaack's Theory of Pneumatization. Ralph Almour, 112.

Pulmonary Complications of Tonsillectomy with Report of Three Cases. James A. Babbitt, 47.

RADICAL Sinus Surgery, General Indications. G. M. Coates, 400.

Resistance of the Upper Respiratory Mucosa to Infection. C. S. Linton, 64.

Respiratory Tract, Upper; Lymphatic Cells in Disease. John L. Jenkins, 539.

Respiratory Tract, Upper; Malignancies of: A Statistical Review. Samuel Salinger, 850.

Retina; Cardiovascular Disease in Relation to It. Norman M. Keith, 95.

Retropharyngeal Abscess of Otitic Origin: Anatomy and Pathogenesis with Report of Cases. Samuel Z. Faier, 408.

Rhinologic Aspects of Tear Sac Surgery. Edward King, 126.

Rhinoscleroma, A Case in a Native Born American. Norton Canfield, 903.

SCHWANNOMA of the Larynx. Harris H. Vail, 476.

Semicircular Canals, Vertical, in the Light of Recent Work. W. J. McNally, 82.

Sinuses, Maxillary; Their Bacteriology: Clinical Aspect. O. H. Maclay, 567.

Sinuses, Maxillary; Their Bacteriology: Laboratory Aspect. R. E. Getty, 576.

Sinuses, The Nasal Accessory, as Foci of Infection in Chronic Arthritis. L. M. Hurd, 39.

Sinuses, Nasal; The Elimination of Lipiodol. J. M. LeMée, 712.

Sinus Infection, Chronic, Nasal. A Discussion of Cardiac, Pulmonary and Other General Conditions Secondary to It. J. B. Potts, 1002.

Sinus Surgery, Radical; General Indications. G. M. Coates, 400.

Sir Felix Semon, His Influence on the Development of Laryngology. Ira Frank, 641.

Sir Morell Mackenzie: Personal Recollections of a Great Laryngologist. D. Bryson Delavan, 321.

Sphenoid Sinus, A Cytologic Study. Edw. C. Sewall, 391.

Styloid Process Fracture and Its Tonsil Fossa Complications, with Report of a Case. J. A. Babbitt, 789.

Suppuration of the Petrosal Pyramid, Surgical Treatment. Ernest M. Seydell, 455.

Sympathetic Nervous System, Its Influence on the Internal Ear. Albert B. Murphy, 166.

TEAR Sac Surgery, Rhinologic Aspects. Edward King, 126.

Temporal Bone Sections and Otitic Meningitis; Some Observations. L. C. Boemer, 866.

Thymus, Enlarged; Otolaryngologic Conditions Wrongly Attributed to It. H. M. Janse, 1110.

Tonsil Fossa Complications Following Fracture of the Styloid Process. J. A. Babbitt, 789.

Tonsillectomy Followed by Pulmonary Complications, with Report of Three Cases. J. A. Babbitt, 47.

Tonsillectomy Followed by Subcutaneous Emphysema. J. C. Dickson, 1240.

Tracheo-Esophageal Fistula, Probably Congenital, in a Woman 58 Years of Age. Richmond McKinney, 1237.

Tuberculosis of the Esophagus with Report of a Case Following Lye Ingestion. M. C. Myerson, 829.

Tumors, Fibro-Epithelial, of the Nose and Their Relationship to Carcinoma. E. M. Seydell, 1081.

VERTICAL Semicircular Canals in the Light of Recent Work. W. J. McNally, 82.

Vibrations vs. Waves in Otology. Francis P. Emerson, 192.

Viscosity, Hydrogen-ion Concentration, Nitrogen Content of Nasal Secretions. C. C. Buhrmester, 1041.

WAVES vs. Vibrations in Otology. Francis P. Emerson, 192.

Wittmaack's Theory of Pneumatization, The Practical Application. Ralph Almour, 112